U. S. DEPARTMENT OF COMMERCE

BUREAU OF FISHERIES

Fishery Circular No. 13 Issued January, 1933

# SPORT FISHING IN ALASKA[1]

By Henry O'Malley, *United States Commissioner of Fisheries*

CONTENTS

| | Page |
|---|---|
| Introduction | 1 |
| Facilities | 3 |
| Season | 4 |
| Localities | 4 |
| Marine game fish | 6 |
| Salmon | 6 |
| Commercial salmon fishery | 9 |
| Other marine fishes | 10 |
| Fishes of coastal streams | 10 |
| Cutthroat trout | 10 |
| Rainbow and steelhead trout | 11 |
| Dolly Varden trout | 12 |
| Eastern brook trout | 13 |
| Fishes of interior lakes and streams | 14 |
| Lake trout | 14 |
| Grayling | 14 |
| Whitefish | 15 |
| Methods | 15 |
| Spinning or strip fishing for salmon | 15 |
| Laws and regulations | 17 |
| Conclusion | 17 |
| Literature cited | 18 |

## INTRODUCTION

In The Compleat Angler, Izaak Walton says: "I will the next two dayes wait upon you, and we two will for that time do nothing but angle, and talk of fish and fishing."

If good old Izaak Walton had ever visited Alaska no doubt he would have given still more of his gentle wisdom and keen philosophy, for his heart would have been gladdened beyond measure by the boundless opportunities easily available there "to angle and talk of fish and fishing" as well as to observe and enjoy other great natural attractions of that splendid northern empire.

Truly, Alaska is an angler's paradise, of almost untouched opportunity, difficult to equal anywhere in the world. Nature has dealt lavishly with Alaska in respect not only to the fisheries, both recreational and commercial, but also with regard to vast mineral resources, great forests, mighty rivers, marvelous glaciers, and towering mountains. There are also almost unbelievably fine growths of

[1] Approved for publication Oct. 21, 1932.

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varicolored wild flowers, luscious berries, fine vegetables, and an abundance of fur-bearing and game animals—all of which are available to those who go to Alaska, whether for sport fishing or general recreation, or to take advantage of business opportunities. There are also the famed "Valley of Ten Thousand Smokes" and the splendid Mount McKinley National Park, as well as other similar attractions for the visitor.

Throughout this setting of natural grandeur are innumerable lakes and streams and practically each one supports a population of one or more species of native game fish. The abundance and food value of these fish were recorded by the earliest explorers who found them to be an important part of the diet of the natives, particularly during the winter when other food was scarce. With the availability of

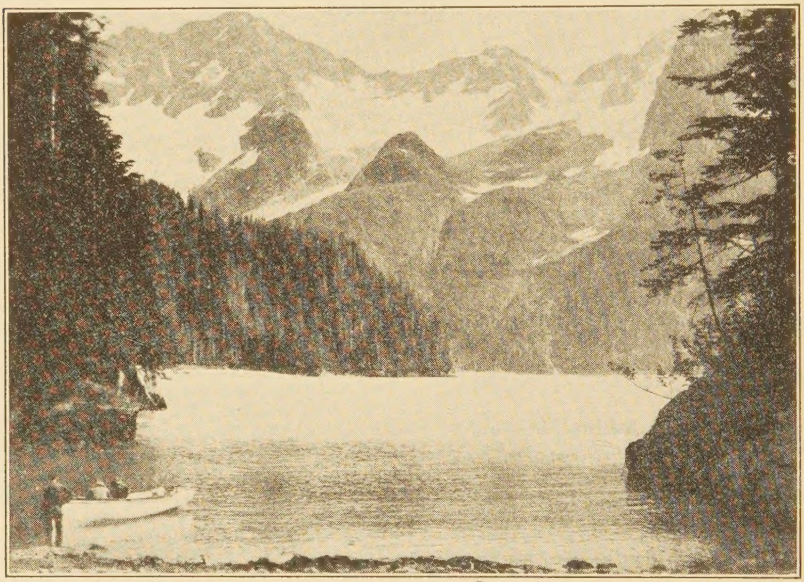

FIGURE 1.—Typical Alaska scene

canned products and other foods imported from the States, the fish of Alaska have come more and more to be regarded for their game qualities rather than for food values alone.

The steady improvement of travel facilities and the construction of trails, railroads, and more recently, automobile roads, have been responsible for the rapidly increasing travel to Alaska for recreational purposes, chief among which are hunting and fishing. Two or more days aboard a luxurious steamer passing through the scenic inside passage of British Columbia and southeastern Alaska and a short trip by launch brings one to any of a number of beautiful trout streams and lakes, unmarred by the progress of civilization. Here is a land one-fifth the size of continental United States, containing countless streams that man has never breasted, myriads of lakes whose placid waters have never felt the thrust of paddle or oar. And in most of them are game fish of some variety. Even the briny ocean yields its finny treasure to the sportsman who is skilled enough to

play and land the fighting king and silver salmon that swim in hordes in the inland and sheltered arms of the North Pacific Ocean along the bay-indented and island-incrusted shores of Alaska. While there are now few coastal streams which are not known, there are many which abound in game-fish life which have never been fished by the angler.

The coastal streams are not alone in providing delight to the angler, for the streams of interior Alaska also abound with game fish. Capt. W. R. Abercrombie, United States Army, exploring the Copper River region in 1899 with a view to establishing a military road in Alaska, reported:

> The food resources of interior Alaska are not as meager as may be supposed. The rivers and lakes abound with choice varieties of fish, such as king salmon, dog salmon, pickerel, perch, bass, whitefish, trout, pike, and grayling.

It is not known which species were referred to as perch and bass, for those fish are not found in Alaskan waters. There is, however, ample evidence of the abundance of the others mentioned.

The streams tributary to the coast differ considerably from those of interior Alaska. The coastal streams are short and fairly swift, flowing through narrow, densely wooded valleys on either side of which are lofty mountains. The stream banks are frequently covered with a rank growth of annual and perennial plants. Many inviting pools are formed throughout the course of practically every coastal stream.

The clear-water streams of the interior are usually very long and have their sources in lakes fed by the melting snows of the different mountain ranges. The upper reaches of these streams are through high plateaus devoid of timber and only sparsely covered with dwarf willows and alders. The lower reaches of such streams are quite free from underbrush and nowhere is the vegetation like that along the coastal streams. The larger rivers which frequently have their sources in glaciers are so heavily silt laden that nowhere are their waters clear enough to afford a view of fish; for that reason they are unfit for sport fishing.

Just how extensive are Alaska's game fishing resources is largely a matter of guesswork. Even those who have used them over a period lasting almost a quarter century hesitate to set a limit on them. It is as if the early colonial sportsman had attempted to fix the same resources of the greater portion of continental United States, some regions of which, like in this land of the midnight sun, had never been visited by the white man. To-day, Alaska's game fish have felt the toll of man but little more than had those of the United States at the time of the Revolutionary War.

## FACILITIES

Most Alaska towns afford not only the comforts but luxuries of life as well. Modern hotels, churches, electric lights, newspapers, telephones, telegraph, social clubs, movies, and libraries are all available. In every town of consequence there are stores well stocked with sporting goods and equipment best suited to Alaskan conditions. Numerous small power boats available for charter may be found at all points along the coast; many of them are suitable for transporting parties to the more isolated localities

and providing living quarters while there. Others are suitable only for short trips during the day for trolling or stillfishing. Boat charters vary considerably, depending upon the size of the boat, number of men in the crew, and the length of the charter. Generally speaking, the boatmen are experienced guides and can direct one to localities where the best fishing may be enjoyed. Hunting and fishing lodges have been constructed on some of the better streams and lakes of interior Alaska which may be reached by automobile or airplane. At several such places rowboats are furnished without charge to guests.

## SEASON

There are no seasonal restrictions on game fishing in the Territory, and no license is required of those who enjoy and follow the sport. However, the fresh-water angling season is defined largely by

FIGURE 2.—Trout stream in southeastern Alaska

weather conditions, and so is limited to the late spring, summer, and early fall. Fish may be taken throughout this period with any of the lures commonly in use. Marine fish, with the exception of the salmon, may be taken at any time during the year, but conditions for their capture are most favorable in the spring, summer, and fall months. The king or chinook salmon is most abundant in the bays and inlets along the coast of southeastern Alaska in the months of May, June, September, and October. The coho or silver salmon is most numerous in September and October.

## LOCALITIES

At numerous points along the Alaska coast, as well as in the interior, excellent fishing may be had with little deviation from the main routes of travel. Trolling for salmon, which holds the greatest attraction for salt-water sport fishermen, is at its best in the channels

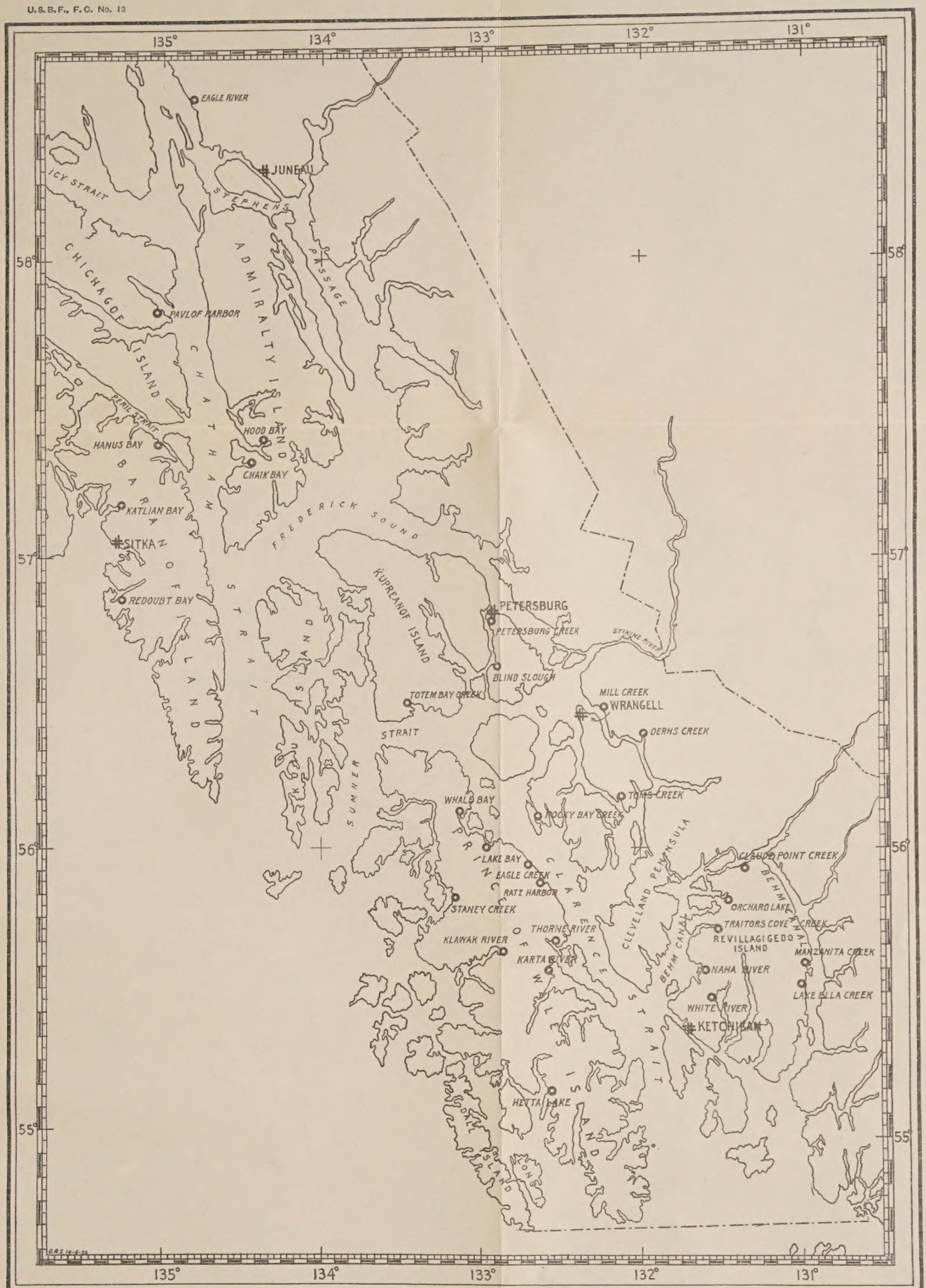


FIGURE 3.—Map of southeastern Alaska showing principal fresh-water sport fishing localities. Many equally as good, as yet unfished by man, may be found by the ardent sportsman

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and inlets of southeastern Alaska. Good salmon fishing may be enjoyed within short distances of the towns of Ketchikan, Petersburg, Wrangell, and Juneau.

It would be an impossible task to enumerate each stream in Alaska in which good fishing may be enjoyed, for there is hardly a stream entirely wanting in game fish. Therefore, only the streams now known and acclaimed by discriminating sportsmen are referred to hereinafter; certainly there are many other less known or wholly untried streams that will yield rich returns to the angler.

The better known trout streams in the Ketchikan region, flowing into Behm Canal from Revillagigedo Island, are: Manzanita Creek, Lake Ella Creek, Claude Point Creek, Orchard Lake, and Traitors Cove Creek. Other good trout streams in this vicinity are Thorne River, Karta River, Lake Grace, White River, Naha River, and the stream in Hetta Bay.

Streams reached from Wrangell and Petersburg are: Mill Lake Creek, Oerns Creek, Aer River, Rocky Bay Creek, Eagle Creek, Toms Creek, Blind Slough, Petersburg Creek, Totem Bay Creek, Staney Creek, Klawak River, and the streams in Ratz Harbor, Whale Bay, and Lake Bay. All are well known as important trout streams.

Eagle River and the streams in Chaik Bay and Hood Bay are good trout streams easily reached from Juneau.

In the Sitka region there are also a number of particularly good trout streams. These are in Pavlof Harbor, Redoubt Bay, Katlian Bay, and Hanus Bay. The stream in the last-named bay is frequently mentioned as the best trout stream in Alaska.

Near Cordova are Eyak Lake, Fish Creek, Billys Hole, Eshamy River, and Twin Lakes, where trout fishing may be indulged.

Bear Creek, Kenai Lake, Russian River, Granite Creek, Ptarmigan Creek, Cooper Creek, Indian Creek, Clear Creek, Sheep Creek, Wassila Lake, and Eklutina Lake near Seward and Anchorage along the line of the Alaska Railroad, provide sportsmen with excellent rainbow, steelhead, cutthroat trout, and grayling fishing.

In the interior of Alaska near the Richardson Highway are: Ernestine Creek, Little Tonsina River, the Chitina Lakes, Gulkana River, Gulkana Lake, Summit Lake, Phelan Lake, Shaw Creek, Birch Lake, and Harding Lake. No better fishing could be desired than that afforded by these streams and lakes. Whitefish, charr, lake trout, and grayling are frequently found in the same streams. Cutthroat trout are less plentiful in these colder waters, but the sportsman finds an able substitute in the grayling.

In western Alaska the Naknek and Kvichak Rivers, emptying into Bering Sea, maintain large colonies of rainbow and steelhead trout. In no other streams in Alaska are these fish so numerous, and the angler is adequately rewarded for a trip to this remote region.

Airplanes have recently come into popular use by sportsmen desiring to cast a fly where few men if any have ever fished. Utilizing this method of transportation a party can leave town in the early morning, enjoy a day of exceptional sport, and return in the evening from a trip that would represent several days of travel and physical hardship to make in any other way. An extract from an article by John E. Pegues, of the editorial staff of the Juneau Empire,

concerning one of the weekly airplane fishing trips from Juneau, follows:

Taking off from the harbor, we are in the air before we have traveled 1,500 feet. Up we climb and head south between lanes of mountains bordering Gastineau Channel. We cross Taku Inlet, skim the low pass into Seymour Canal, a mile-long wooded stretch that passes beneath like a pencil mark on a piece of paper, down Seymour Canal still between towering peaks. There comes ahead a break in the mountain chain and before we know it, the plane has darted through and is hovering over a lake 15 miles long and 2 to 3 miles wide. It wings over and descends in a long arc, coming to rest lightly as a gull on the upper end of the lake near the mouth of a large creek.

We are at the grounds. The water is so high there is no shore line and under ordinary conditions the outlook to the angler would be discouraging. Not so here. The fishermen rig their tackle, each selecting his favorite fly. Out on the pontoons they clamber and from that more or less precarious perch soon flies are dropping on the mirrorlike surface of the lake. The pilot, as ardent a fisherman as any, makes his way to the propeller and, sitting astride the shaft, does his stuff from there. It is cast and reel in. Most of the fish, cutthroat trout of the purest sort, are large ones, some measuring 28 inches and many exceeding 20 inches. A one-armed hobo at a free lunch counter was never so busy as these fishermen are kept while they are at it. Each fish must be played and landed with care in a net. A "killer" or "fish-hog" could land almost a fish a minute if he got into action here. As it is the average sportsman can take as many as he can pack in a very short time.

The marine game fish are widely distributed over the entire southern coast of Alaska and most species may be taken at any point along the main routes of steamer travel. Nearly every dock or float affords the marine angler an opportunity to try his skill. Usually greater opportunities are offered at some distance from the more settled sections of the coast.

Both the chinook or king salmon and the silver or coho salmon are found along the southern coast of Alaska, with the center of abundance off the coast of southeastern Alaska in the inlets and channels between the numerous islands. In the streams and lakes of Alaska there are at least three species of trout of the genus *Salmo*, one of the genus *Cristivomer*, and one of the genus *Salvelinus* that are native to those waters. In addition to the trout, the grayling and whitefish are abundant in certain localities. These species, together with numerous salt-water fishes, offer extremely diversified possibilities to the angler in Alaska.

## MARINE GAME FISH

### SALMON

Two species of Pacific salmon of interest to the sportsman are the chinook or king salmon and the silver or coho salmon. Both species are of wide distribution, ranging north into the Arctic Ocean, and both appear in greatest numbers in the waters of southeastern Alaska. Of the two, the chinook or king is by far the larger, and therefore the most sought after by the salt-water angler. This fish occasionally reaches a maximum weight of nearly 100 pounds, the average being about 20 pounds. The silver or coho salmon reaches a weight of 30 pounds but averages about 8 pounds. Aside from the difference in size the two species externally appear quite similar to the casual observer. With a little practice they can be segregated definitely without hesitation.

tackle with a running bowline. This is payed out astern of a gasboat. When the fish strikes the spoon or bait on the lighter tackle, the heavy tackle and weight are thrown off. The fisherman then jumps into a skiff towed alongside the gasboat. The rest of the performance depends on the fish and fisherman. If the god of fishermen is with him and his own fitness does not crack, it is not impossible to land even a 100-pound king; but one one-third that size puts up a soul-satisfying battle for the average sportsman.

### COMMERCIAL SALMON FISHERY

The salmon fisheries of Alaska are the most valuable in the world, yielding more than one-half of the world production of canned

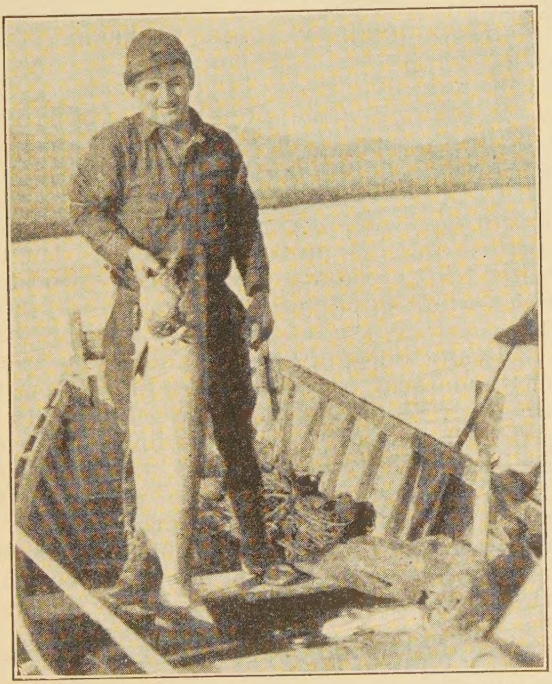

FIGURE 6.—What the sportsman may expect when fishing for king salmon

salmon, and more than 80 per cent of the pack prepared from waters of the United States. In 1931 the total Pacific salmon pack, including that prepared in Alaska, British Columbia, the Pacific Coast States, Siberia, and Japan, amounted to about 9,000,000 cases, of which more than 5,000,000 were packed in Alaska. The average annual value of this Alaska product is in excess of $35,000,000.

It is evident, therefore, that in Alaska the salmon is essentially a commercial fish although some species display the qualities of game fish and come within the scope of the sport fisherman. In the case of the king and silver salmon the sportsman and commercial fisherman in Alaska have common interests, and it is through their cooperation and mutual understanding of the problems of conserva-

tion that the runs of these species will be maintained on an enduring basis.

Many of the 116 canneries operated in Alaska in 1931 are located in or near the regular ports of call of Alaska vessels and others are located along the steamer routes, where they may be conveniently visited by tourist or sportsman. The amazing rapidity with which large numbers of salmon are handled in the various processes of canning by modern sanitary machinery will be a revelation to the average consumer of canned salmon.

### OTHER MARINE FISHES

Alaska offers a fine though neglected field for salt-water sport fishing. Excellent opportunities may be enjoyed along much of the coast when the tackle is graded to suit the game. In addition to such fish as the king and silver salmon, the white surf fish or viviparous perch, the numerous species of rockfish or so-called rock bass of the genus *Sebastodes*, and the several species of greenlings of the genus *Hexagrammos*, commonly called rock cod or kelp cod, abound in North Pacific waters and would be eagerly sought in localities less fortunate in the supply of fresh-water game fishes.

Three genera of the family of surf fishes are represented in Alaskan waters. These fish range from 6 to 15 inches in length and when taken on a baited hook are able to make a fairly good fight.

There are at least 19 species of the common rockfish or rock bass in the coastal waters of Alaska. They are resident in rather deep water about rocks and among the algæ. They range from 1 to 2 feet or more in length and may be readily taken on a baited hook.

The greenlings are represented by three genera and at least seven species along the Alaskan coast. They are found in the same habitat as the rockfish. All are carnivorous fishes, mostly of large size, and are readily taken on baited hook. Most of them are valuable food fishes and are utilized commercially to a small extent.

The sea fishes mentioned are only a few of the better known forms that might be included in a liberal definition of game fish. They are, however, indicative of the wealth of material for the sea angler.

## FISHES OF COASTAL STREAMS

The cutthroat trout (*Salmo clarkii*) and Dolly Varden trout (*Salvelinus parkei*) are by far the best known and most numerous of the fresh-water forms in the coastal streams. The rainbow trout (*Salmo irideus*) and the steelhead trout or salmon trout (*Salmo gairdneri*) are plentiful in restricted areas. In addition to these native species the eastern brook trout (*Salvelinus fontinalis*) has been planted in lakes and coastal streams separated from the sea by impassable barriers, and it bids fair to be an important game fish for Alaska anglers.

### CUTTHROAT TROUT

The cutthroat trout is one of the best known game fish among the anglers of Alaska. It is widely distributed in the streams and lakes in southeastern and central Alaska, where in certain streams it is extremely abundant. Those individuals found in lakes of consider-

able size, where the water is of such temperature and depth as to insure an ample food supply, grow to a large size. Dwarfed forms occur in small landlocked lakes where the food supply is limited. From such lakes large numbers of trout may be taken by the angler in an incredibly short time and the extreme uniformity in size is very noticeable. When selecting the waters to be fished, the angler must choose between the number of fish he desires to take and the

FIGURE 7.—Cutthroat trout

size of the individuals. The broad, rich red dash is always present on the throat of the adult cutthroat and constitutes a most important character by which it may be distinguished from allied species.

### RAINBOW AND STEELHEAD TROUT

The steelhead trout and rainbow trout are closely associated and generally found in the same streams. Both are beautifully colored and exceedingly gamy fish with greater endurance than their smaller

FIGURE 8.—Rainbow trout

relatives. The bright tip of the anal, ventral, and dorsal fins, rosy sides, large scales, and absence of red on the throat enable the sportsman to distinguish the rainbow from the cutthroat. The steelhead differs from the cutthroat in having larger scales, a shorter head, and a smaller eye; it is also less profusely covered with black spots, the tail is more nearly square, and there is no red on the throat. It

differs from the Alaska rainbow trout by having a smaller eye, somewhat smaller scales, and less brilliant coloration. This latter distinction is not at all clear, and it seems probable that the so-called

FIGURE 9.—Steelhead trout

rainbows of the coastal streams are simply the young steelheads that did not enter the sea but remained in fresh water where they took on more brilliant colors and reached maturity at a smaller size. Whether they are called rainbows or steelheads does not matter, but from the point of classification it seems likely that the differences are subspecific, and that both should be correctly classified as *Salmo gairdneri*. The steelhead reaches a larger size than either the cutthroat or the rainbow. It is more or less anadromous in its habits, being migratory like the salmon. In some parts of Alaska it is taken in small quantities in the commercial salmon fishery.

### DOLLY VARDEN TROUT

Although the Dolly Varden, bull trout, or common charr is resident in fresh water, it often descends to the sea and is frequently

FIGURE 10.—Dolly Varden trout

taken in salt and brackish waters. During the summer months it may be found in large schools in and about the mouths of salmon streams or in warm shallow lake water. This charr reaches a

The king salmon is dusky on the back, tinged olivaceous or bluish on the sides, and silvery below. The head is a dark slate color, usually darker than the body. The back, dorsal fin, and caudal fin are usually profusely covered with round black spots.

The color of the silver salmon is bluish-green on the back, and the sides are silvery with dark punctulations. There are no spots except a few rather obscure ones on top of the head, on the back, dorsal fin, adipose fin, and the rudimentary upper rays of the caudal.

The two species may be definitely segregated by a count of the branchiostegal rays, the bony rays under the head and behind the gill covers, which in the king salmon is from 15 or 16 to 18 or 19, and in the silver salmon is 13 or 14.

The king salmon can be distinguished from the coho by its actions when hooked. It generally takes the hook below the surface and sounds at once, taking out several hundred feet of line. All of the fighting is far below the surface, and only rarely does a king break water. On the other hand, the coho will often strike when the bait or lure is in sight. When hooked it makes a fast run of 30 feet or

FIGURE 4.—Chinook or king salmon

more, breaks water, and leaps several feet into the air. The coho continues these tactics on the surface until played out, and for that reason it is regarded by some sportsmen as a game fish superior to the king.

John E. Pegues has vividly described the sport of salmon fishing as follows:

> From the sportsman's standpoint, the salmon fishery is the greatest this northland has to offer. Beside it, trout and grayling fishing, unparalleled as they are, pale into insignificance. Few devotees of the rod and reel who have felt the mighty surges of 35 pounds or more of maddened, fighting king salmon, testing skill of fishermen and durability of tackle, ever return to the trout streams and lakes with quite the same degree of enthusiasm. It is the acme of sport and one in which those who excel are greatly outnumbered by those who do not. It has thrills even with a hand line and a leaden slug that the average trout would have difficulty in towing, but with a light line, no weight, a light rod and a skiff or canoe, even the most hardened experienced veteran of them all will have his moments of aberration when business and professional duties lose their appeal. Here is work that is pleasure, a test of nerve, a trial of the firmness of wrist, strength of arm, and skill to combat the living thunderbolt on the other end of the light line.
>
> The range of the Alaska salmon fishery is widespread. From Dixon Entrance on the southern border, around thousands of miles of rugged, stream-pierced

and bay-indented coastline, through the passages between the 1,100 islands of the southeast, Prince William Sound, Cook Inlet, Kodiak, the Alaska Peninsula, Bristol Bay, northward even into the Arctic waters of Kotzebue Sound the fish that is the Territory's greatest economic asset as well as its finest sportsman's resource are taken. By seine, net, trap, hook, and spoon the commercial fisherman takes his millions of pounds of certain varieties each year. In the great rivers of the hinterland, primitive fish wheels, gaff hook, and even spears are used. It is worth while watching a grave Indian buck stand on the shore of the Yukon until he sights the riffle of a big king salmon plowing his way upstream toward some remote spawning bed where years before he emerged from the egg as a tiny, wriggling minnow, jump into a canoe and with swift thrusts of the paddle shoot alongside, jab his spear into the whitish, glacial water and draw forth his struggling prize.

From the sporting point of view, only the kings and silvers are worthy of consideration. The several other varieties of salmon are valuable only from a commercial standpoint. Anywhere along the coast the kings and silvers are to be taken, but the waters of southeastern Alaska probably offer the best field for the angler desiring to go north for some real sport.

In that section, behind the island barriers to the sea, are long stretches of the ocean where fishing can be done without hazard,

FIGURE 5.—Coho or silver salmon

and with almost perfect freedom from seasickness which is a damper even to sport. From any of the towns, Ketchikan, Wrangell, Petersburg, Juneau, Douglas, Sitka, Skagway, and smaller communities it is but a few minutes to a few hours ride on a small boat to the fishing grounds, as they are generally termed. Chatham Strait, the channel dividing Chichagof and Baranof Islands from Admiralty Island, is the finest of these. Here hundreds of commercial trollers center during the season, operating in power boats for kings and silvers that find their way to thousands of tables from the Pacific to the Atlantic seaboard. Stephens Passage, Lynn Canal, Frederick Sound, Icy Strait, Clarence and Sumner Straits, Behm Canal and the waters off the west coasts of Prince of Wales and Baranof Islands also teem with these fish.

Kings and silvers will take spoons, hooks baited with herring, lures of various kinds, but not flies. Unlike the salmon of the St. Lawrence River they do not strike at the surface, as a rule, but beneath it. For that reason a common method of fishing is to rig heavy tackle with a large sinker, attaching it to light sporting

maximum length of 3 feet and a maximum weight of 15 pounds. It is readily taken on salmon eggs, other bait, or spinner, and occasionally may be induced to take a fly. A feature which at once distinguishes the Dolly Varden from all other American trout is the coloration. The general color is olivaceous and the sides and back are spotted with round red or orange spots. The sea-run examples are silvery, with the spots pale or entirely wanting.

Ordinarily the Dolly Varden does not rank high as a game fish because it is usually logy, never jumps, and makes a poor fight. The gameness of this fish, however, varies greatly with the character of the water and the season, just as with any game fish. When taken in the cold mountain streams it displays the superior game qualities associated with its close relative, the eastern brook trout.

Stewart Edward White, famous author, angler, and conservationist, has said:

> In view of the prejudice against the Dolly, born of its performance in the warmer waters farther south, I should like to emphasize its desirable qualities, both as a fighting game fish and as a good article of food. As a brother of the famed eastern brook trout he deserves a better reputation. Personally, I would rather catch him as he is found in the southeastern Alaska streams than either the cutthroat or the rainbow. Good fly fishing can generally be had, though it is not as fast as on spinners; and eggs need never be used.

### EASTERN BROOK TROUT

In addition to the fresh-water game fishes native in Alaska, the Bureau of Fisheries in 1931 introduced the eastern brook trout into barren lakes and other interior lakes in southeast Alaska in the vicinity of Ketchikan, Wrangell, Petersburg, Red Bluff Bay, and Juneau, at the request of various civic organizations. Trout were not planted where they would be in any manner a menace to the salmon runs. The distribution was made by airplane to lakes in the vicinity of Ketchikan, Juneau, and the Yes Bay hatchery. The fish were transported from the hatchery to Juneau by boat and from there were taken by plane to the lake to be stocked. Fish were also delivered by boat to Wrangell, Petersburg, and Red Bluff from which points they were transported to interior lakes by local parties under the immediate supervision of agents of the Bureau of Fisheries.

Following the successful planting of eastern brook trout in 1931 a further extension of the range of that species was undertaken in 1932 when 36,000 fingerlings were distributed to 11 interior landlocked lakes in southeastern Alaska. As before, the trout were hatched and reared at the Yes Bay hatchery and planted under the direction of officials of the bureau. Trout were distributed by seaplane to Manzanita Lake, Grace Lake, Perseverance Lake, and Mahoney Lake in the Ketchikan region. Bureau vessels transported fish for distribution from the hatchery to Petersburg, Juneau, Haines, and Skagway. From Juneau trout were taken to two unnamed lakes near Mendenhall Glacier by automobile, and to Lake Hasselburg on Admiralty Island by seaplane. Distribution from Petersburg, Haines, and Skagway was accomplished by automobile. Ideal Cove Lake near Petersburg, Rutzeback Lake near Haines, and Lower Lake Dewey and Goat Lake near Skagway were the lakes stocked in this manner.

## FISHES OF INTERIOR LAKES AND STREAMS

The streams and lakes of interior Alaska abound with lake trout (*Cristivomer namaycush*), Arctic or Alaska grayling (*Thymallus signifer*), and several species of whitefish. The Dolly Varden, cutthroat trout, and the common pike or pickerel (*Esox lucius*) are also present in limited numbers.

### LAKE TROUT

One of the largest of the salmon family is the lake trout or Mackinaw trout found in the northern lakes and their tributary streams. It is the largest of all trouts and is known to reach a length of several feet and a weight of 60 pounds. Authentic records of the weight of this trout in Alaskan waters indicate that those weighing 35 pounds are not uncommon. The average weight probably does not exceed 10 or 15 pounds. The lake trout is a predacious feeder, devouring large numbers of smaller fishes and some of the smaller

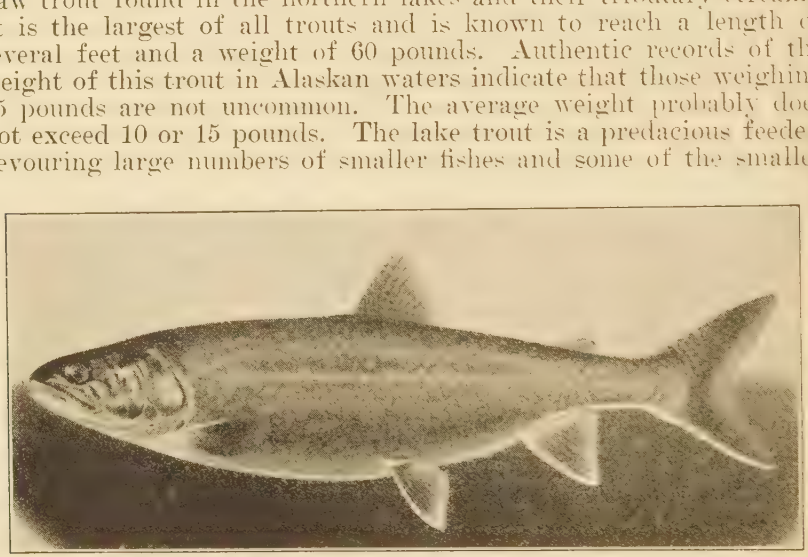

FIGURE 11.—Lake trout

aquatic mammals. Apparently it does not confine its feeding to nourishing material for it is said that jackknives, corncobs, and other equally indigestible articles have been found in its stomach. The lake trout can be distinguished readily from all other Alaskan Salmonidæ by its color, which is dark gray and sometimes almost black, but in every case with rounded paler spots which are often tinged with yellow or red. This trout is held in different degrees of esteem by different anglers. While not an especially vigorous fighter its great size makes it difficult to capture on light tackle. It is usually taken by trolling with a spoon or by casting with a spinner. The latter method should find high favor with the angler.

### GRAYLING

Like the lake trout, the Arctic grayling is of wide distribution in northern Alaska, particularly throughout the Yukon Basin. It is a beautiful and well proportioned fish having a very long dorsal fin by which it can always be identified. It reaches a length of 20 inches and attains a weight of 4 pounds in the Gulkana River but is usually much smaller in other streams. As a game fish the grayling is un-

excelled. It is usually found in the clear swift streams where it rises to a fly readily. Once hooked it tries the skill of the most expert angler. The "black gnat" has been demonstrated as the most successful fly for grayling fishing in the streams of interior Alaska.

### WHITEFISH

There are at least four species of whitefish in Alaskan waters. None is regarded as a game fish, but all are important food fish and are extensively used by local inhabitants. If it were not for the abundance of the more gamy trout and grayling one or two of the species of whitefish would surely be sought by the angler.

## METHODS

Sport-fishing methods for fresh-water game fish have been fairly well standardized the world over. Flies, spinners, and bait are in common usage, each varying somewhat with the species sought, the locality, the season, and to some extent with the eccentricities of the angler himself.

Both wet and dry flies are used in Alaskan streams with equal success. Those most frequently taken by trout are the black gnat, coachman, royal coachman, brown hackle, and gray hackle. These flies have proved to be equally attractive to the grayling of interior waters.

Any of a number of small casting spinners are used with success in the streams and lakes of Alaska. Dolly Varden, steelhead, rainbow, and cutthroat are frequently taken in large numbers on this type of lure, and the large lake trout are taken on spinners and small spoons exclusively.

Speaking of lures used in Alaska, Stewart Edward White has said:

> I have found that barbless No. 8 flies of the following patterns are most frequently taken: Coachman, royal coachman, brown hackle, both plain and red tail, black gnat, cow dung, professor, and dusty miller. These will fill the bill as far as the fish are concerned, and the fisherman can please himself with as many more as he fancies. A very small casting spinner of brass, not larger than No. 1, can be handled about as well as a fly. The "Boyle" is the best in that it does not foul on itself.

The bait used with greatest success in fresh water is salmon eggs. Dolly Varden and cutthroat trout, grayling, and whitefish may be taken when stillfishing with this bait. Other baits which have been used successfully are raw meat, worms, live minnows, and parts of other fish, particularly the brightly colored fins or the eyes.

For marine game fish, clams, herring, raw meat, and parts of other fish are most common baits used for stillfishing.

## SPINNING OR STRIP FISHING FOR SALMON

There has developed recently a modification of commercial trolling for king and coho salmon that offers the angler splendid opportunity to test his skill with light tackle. While these salmon have been taken for many years in the commercial troll fishery, there has been comparatively little trolling for these species by sportsmen

This new form of sport fishing has become very popular in the vicinity of Juneau and other places in southeastern Alaska. Local anglers have designated this new and exciting sport as "salmon strip fishing." It is said that this name has been applied for two reasons: (1) The preferred bait is a strip of herring, although small whole herring are used, and (2) the line is stripped from the reel for easy manipulation. This form of sport fishing is also referred to as "spinning" for salmon.

Fresh or frozen herring make the best bait, but other baits will do. The method of preparing the bait strips is to cut the herring along the center of the back from head to tail, then along the side from gills to tail, which produces a strip of white belly attached to the dark back. A cut is then made across, just back of the gills, and the back portion is split from the gills to the tail close to the backbone. Two such strips are taken from each herring, and the unused belly portion with backbone and head attached is thrown overboard as an attraction to salmon in the vicinity. The piece of bait as cut is of triangular shape and quite thin at one end.

It is important that this bait be impaled properly on the hook to produce best results. The hook should be run through the upper thick end of the strip of bait quite near the corner. It should then be tried, and, if it does not spin when pulled through the water, its position on the hook should be altered until it spins satisfactorily. The object is to have the bait so cut and impaled as to cause it to spin or wobble as it is drawn through the water, thus giving it the appearance of a crippled herring or other fish. The line should be soaked so that it will be limber and not tangle when the cast is made.

The angler casts and trolls until the fish are located, usually in 30 to 40 feet of water but occasionally in as much as 70 to 80 feet; then the boat is anchored and the fishing is conducted entirely by casting. In this operation the baited hook is cast as far as possible, usually about 100 feet, and is permitted to sink to or near the bottom; and the line is then stripped or hauled in by hand in a series of long, free strokes if a strip of herring is used, but quicker action is necessary in pulling in the line if a small whole herring is used for bait. As the line is drawn in by hand it is allowed to coil on the deck or in the bottom of the boat at the fisherman's feet, and is in readiness to be payed out on the next cast. This operation is repeated, as necessary, until a fish is hooked, after which the reel is generally used in completing the catch.

Salmon will strike at different depths, both as the line is going down and as it is being pulled in. When a salmon is hooked either the reel is used in playing it as in ordinary fishing, or the line is worked back and forth through the fingers until the fish is finally hauled to the boat and picked up with a dip net.

In the Juneau region more coho than king salmon are taken. It is said that some of the best salmon spinning or strip fishing for both kings and cohos obtainable anywhere is possible along the mainland shore from Juneau to Eagle Harbor, a distance of about 25 miles. These fishing grounds are easily accessible by automobile from Juneau.

The equipment is not expensive and is quite similar to a good surf-casting outfit. Such equipment consists of a 6 to 8 ounce rod, fitted

vith porcelain or agate guides; a good-sized reel with large center ore; 400 to 600 feet of Japanese raw silk, or gut line, or equal, of rom 20 to 30 pound test; a 4-foot leader of gut, invisible type, of bout 15-pound test; a 1 to 2 ounce lead half-moon shaped sinker bout 2 inches long, or other size suitable to depth of water, which or best results is rigged between leader and line; and hooks of No. 3 ize, or No. 1–0 hooks used in steelhead fishing.

Many other marine species may be attracted and taken by this nethod of angling. In the course of a day of fishing, gray cod, ockfish, halibut, sablefish, and greenling, as well as salmon, may be captured.

## LAWS AND REGULATIONS

The regulations of the Department of Commerce for the protection of the fisheries of Alaska do not contain any prohibitions with

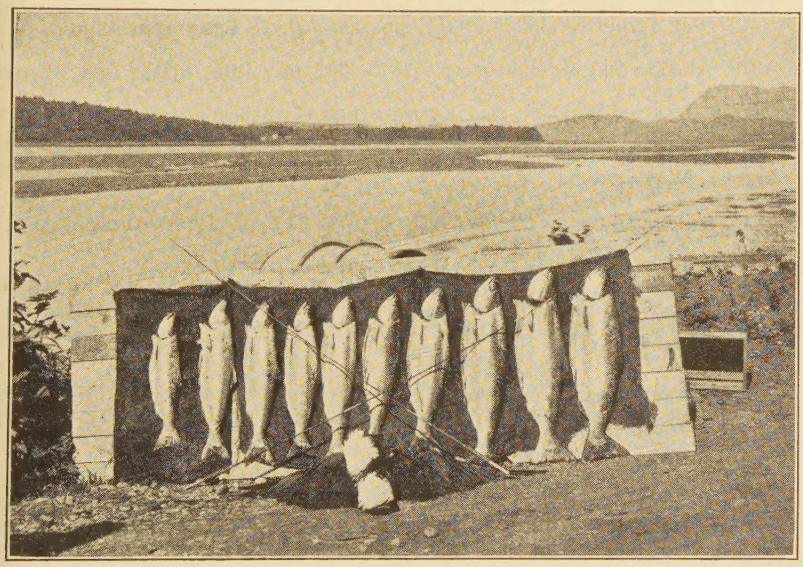

FIGURE 12.—A catch of silver salmon

respect to angling. In order, however, to protect a fish-cultural project authorized by the 1931 session of the Territorial Legislature providing for a program of stocking the lakes and streams with desirable species of game fish in the regions adjacent to the Alaska Railroad, Richardson Highway, and Steese Highway, a territorial law was enacted making it unlawful to take or attempt to take such fish for a period of three years after liberation. Aside from this one restriction the angler in Alaska is confronted with no regulations. There are no bag limits, no closed seasons, no size limits, and no license is required.

## CONCLUSION

Truly, Alaska is a land of real promise and opportunity for any one who wishes to indulge in the gentle and enticing art of angling. An abundance of easily accessible game fish of both fresh water and

salt water varieties assures satisfaction to any disciple of Izaak Walton, whether he be novice or seasoned veteran. The splendid resources of Alaska offer unlimited opportunity to any sportsman or recreationist to visit that hospitable and charming northern land for the enjoyment of excellent angling or other wholesome and invigorating recreation. Comfortable passenger steamers from Seattle will land the traveler in southeastern Alaska in two or three days after a 700-mile coastal voyage of great scenic charm through the famed "Inside Passage," at a cost unbelievably low. A real treat is in store for those who visit Alaska.

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NOTE.—To the interested person contemplating a trip to Alaska for the purpose of angling or general recreation there is an opportunity to secure literature concerning Alaska and its natural resources from any of the several steamship companies, which offer comfortable cruises from Seattle or other Pacific coast ports to Alaska. Additional information concerning angling possibilities in Alaska may be secured from the office of the Governor of Alaska, Juneau; the U. S. Bureau of Fisheries office at Juneau; Biological Survey, Juneau; Alaska Railroad, Anchorage; and from the chambers of commerce of the various Alaska towns.

U. S. GOVERNMENT PRINTING OFFICE: 1933

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